

**Remarks**

Claims 1, 2, 4-8, 10, 11, 13, 14, 20, 21, 23, and 24 are pending in this application. Claims 1, 2, 4-8, 10, 11, 13, 14, 20, 21, 23, and 24 have been rejected. Claim 1 has been objected to because of an informality. Claims 1, 7, and 20 have been amended herein. Claims 1, 2, 6-8, and 10 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Japanese Application 03-300482 to Saito (hereinafter, "Saito") in view of U.S. Patent No. 5,307,003 to Fairbanks et al. (hereinafter, "Fairbanks"). Claims 4, 5, 11 and 14 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Saito in view of Fairbanks and further in view of U.S. Publication 2004/0255174 to Chen (hereinafter, "Chen"). Claim 13 has been rejected under 35 U.S.C. 103(a) as being obvious over Saito in view of Fairbanks and Chen, and further in view of U.S. Publication 2004/0178940 to Wittlinger (hereinafter "Wittlinger"). Claims 20-21 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Saito in view of U.S. Patent No. 5,841,313 to Levin (hereinafter, "Levin"). Claim 23 has been rejected under 35 U.S.C. 103(a) as being obvious over Saito and Levin and further in view of Wittlinger. Claim 24 has been rejected under 35 U.S.C. 103(a) as being obvious over Saito and Levin and further in view of Chen.

Applicants note that the Office Action Summary sheet indicates an objection has been made to the Specification. However, Examiner has made no such objection in the written remarks of the Office Action. Applicants assume the notation on the Office Action Summary sheet to be an inadvertent error and will not address this objection in the following remarks.

**A. Remarks Regarding Independent Claims 1 and 7**

Claim 1 has been objected to due to an informality. Applicants have amended claim 1 as requested by the Examiner. Applicants request that the objection be withdrawn.

Independent claims 1 and 7 have been rejected as being obvious over Saito and Fairbanks. To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). “All words in a claim must be considered in judging the patentability of that claim against the prior art.” *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). The combination of Saito and Fairbanks fails to teach or suggest the following required elements of independent claims 1 and 7: (a) wherein the total rated capacity of the functioning power supplies of the array is less than the maximum power draw of the computer system, and (b) identifying by an array controller the loss of operation of a power supply of the redundant power supply array.

**1. Saito and Fairbanks Fail to Disclose: Total Rated Capacity of the Functioning Power Supplies of the Array Is Less Than the Maximum Power Draw**

Saito fails to teach or suggest “wherein the total rated capacity of the functioning power supplies of the array is less than the maximum power draw of the computer system.” Applicants have amended claims 1 and 7 to clarify this limitation. As discussed in the background section of Applicants’ Specification, one type of power supply configuration is an  $N + 1$  configuration. (Spec. at ¶ 3.) “In an  $N + 1$  power supply configuration, one power supply in the power supply array can fail without affecting the performance of the computer system, as the computer system may continue to operate with  $N$  operational power supplies.” (*Id.*) In contrast to the  $N + 1$  configuration, Applicants invented a system and method where, because “the power consumption of the computer system is regulated in the event of a loss of a power supply, the individual power supplies of the computer system may be smaller in size and power output

capacity.” (Spec. at ¶ 5.) Thus, the total rated capacity of the functioning power supplies (after the loss of a power supply) of the array is less than the maximum power draw.

However, rather than teaching or suggesting Applicants’ invention, Saito discusses the N + 1 configuration (*see, e.g.*, Saito at ¶ 14 (discussing “using a redundancy power supply unit as a base (n+1). . . .”)). As noted in the Office Action, Saito discusses “an array of redundant power supplies [8a-8c].” (Office Action at 3.) And, “each power supply in the array is rated to a power delivery capacity [e.g., 50A] that is less than the maximum power draw [e.g., 150A] of the computer system [0012-13].” (*Id.*) Saito’s power supply system discusses supplying a load of 100A, which is equal to maximum rating of two of the three power supplies. (*See* Saito at Constitution.) “By setting a capacity rating at 100A for the entire power system, the power system can work as a redundant power supply from which the normal output is supplied even if one power supply gets down.” (Saito at Constitution.) Thus, in Saito’s N + 1 configuration, the total rated capacity of the two functioning power supplies (after the loss of the third) of the array is equal to the maximum power draw of the load supplied by the power system.

Not only does Saito fail to disclose the requirement that the total rated capacity of the functioning power supplies be less than the maximum power draw, but Saito also teaches away from Applicants’ invention. Saito teaches a power system where “the normal output is supplied even if one power supply gets down.” (Saito at Constitution.) Saito teaches: “This invention aims at making magnitude of a power unit into 1.5 times or the magnitude not more than it compared with a non-redundancy power source. . . [and] aims at the ability to be made to do even when a power unit is downed.” (Saito at ¶ 5.) “[E]ven if one set of a power source is downed . . . normal output is supplied as a whole.” (Saito at ¶ 12.) Thus, throughout the reference, Saito teaches away from a power system where, with the loss of operation of one

power supply, the functioning power supplies have a capacity less than the maximum power draw.

Additionally, Fairbanks fails to remedy this deficiency. There is no mention of the capacity or rating of a power supply unit, and specifically, Fairbanks fails to teach or suggest total rated capacity of the functioning power supplies of an array being less than the maximum power draw of the computer system.

## **2. Saito and Fairbanks Fail to Disclose: Identifying by an Array Controller**

The combination of Saito and Fairbanks fails to teach or suggest “identifying by an array controller the loss of operation of a power supply of the redundant power supply array.” Neither Saito nor Fairbanks teaches or suggests an array controller for a redundant power supply array. In the figure presented in Saito, no array controller is shown (as elements 8a-8c are power supplies). Additionally, the cited portion of Saito, namely paragraphs [0012] and [0013], fails to teach or suggest that any such array controller could be used to identify the loss of operation of a power supply of a redundant power supply array. The Office Action does not cite to Fairbanks as teaching the “identifying” step, and, as stated above, Fairbanks fails to teach or suggest an array controller for a redundant power supply array, and as such, does not remedy the deficiencies of Saito.

Thus, the combination of Saito and Fairbanks fail to teach or suggest these required elements of independent claims 1 and 7, and therefore, the combination fails to render these claims obvious. Applicants respectfully request that the rejection of these claims be withdrawn.

## **B. Independent Claim 20**

Independent claim 20 has been rejected as being obvious over Saito and Levin.

Applicants respectfully disagree. The combination of Saito and Levin fails to teach or suggest the required elements of claim 20: (a) wherein the total rated capacity of the functioning power supplies of the array is less than the total rated capacity of the maximum power draw of the computer system, and (b) identifying by an array controller the loss of operation of a power supply of the redundant power supply array. Saito fails to teach or suggest these claimed elements for the reasons stated above with respect to independent claims 1 and 7. Additionally, Levin does not discuss power supply ratings or capacities at all, and thus fails to teach or suggest the total rated capacity of the functioning power supplies of an array being less than the maximum power draw of the computer system. Finally, Levin fails to discuss array controllers, and as such, does not teach or suggest element (b) above. Thus, the combination of Saito and Levin fails to teach or suggest these required elements of independent claim 20, and therefore, the combination fails to render this claim obvious. Applicants respectfully request that the rejection of this claim be withdrawn.

#### **C. Dependent Claims**

The pending dependent claims will not be discussed individually herein, as they depend from otherwise allowable base claims.

#### **D. No Waiver**

All of Applicants' arguments are without prejudice or disclaimer. By not responding to additional statements made by the Examiner, Applicants do not acquiesce to the Examiner's additional statements, such as, for example, any statements relating to what would be obvious to a person of ordinary skill in the art. The current amendments to the claims are sufficient to overcome the novelty and obviousness rejections.

**Conclusion**

Applicants respectfully submit that the pending claims 1, 2, 4-8, 10, 11, 13, 14, 20, 21, 23, and 24 of the present invention, as amended, are allowable. Applicants respectfully request that the rejection of the pending claims be withdrawn and that these claims be passed to issuance.

Respectfully submitted,



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